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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LY, NGHI H	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
12/19/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/598,984	KRAIEM ET AL.	
	Examiner	Art Unit	
	Nghi H. Ly	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18,20-31 and 36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,20-31 and 36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/07 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-5, 7-9, 11-14, 18, 20-24, 26-28, 30, 31 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuprun et al (US 6,115,580) in view of Morris et al (US 5,003,619).

Regarding claims 1, 13, 18, 20 an 31, Chuprun teaches a method to create a topology map of a **wireless network** (see wireless network of fig.1), wherein said wireless network includes a plurality of **network devices** (see network devices of fig.1), wherein said network devices include **mobile network devices** provided for direct wireless communication in-between each **mobile network device** (see mobile network devices of fig.1, see wireless connection in-between each mobile network device, and column 4, lines 32-35, see "*each node is transmitted to all of the other nodes*"), and wherein said topology map indicating the quality of connectivity of each of said plurality of network devices with all other network devices of said plurality of network devices (Abstract, column 2, lines 1-14 and column 3, lines 45-50, see "quality"), comprising: performing a measurement phase in which a calibration signal is successively broadcasted by each network device and in which all respective other network devices receiving said calibration signal directly from a broadcasting network device measure the received signal quality (Abstract, column 2, lines 1-14, column 3, lines 45-50 and column 6, lines 22-32, see "quality", "path selection"), and performing a creating phase in which said topology map of the network is created within the network device creating

said topology map on basis of all received measurement results (see fig.1, Abstract, column 2, lines 1-14, column 3, lines 45-50 and column 6, lines 22-32, see "quality", "path selection").

Chuprun does not specifically disclose performing a reporting phase in which the measurement results are directly wirelessly transmitted from each network device to the network device creating said topology map

Morris teaches disclose performing a reporting phase in which the measurement results are wirelessly transmitted from each network device to the network device (see Abstract and column 3, lines 51-60).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Morris to the system of Chuprun in order to minimize battery consumption and maximize the operational life of the subscriber unit (see Morris, Abstract).

Regarding claim 2, Chuprun teaches the calibration signal is transmitted in a dedicated control channel (see mobile network devices of fig.1, see wireless connection in-between each mobile network device, and column 4, lines 32-35, see "*each node is transmitted to all of the other nodes*").

Regarding claims 3 and 22, the combination of Chuprun and Morris further teaches the measurement results are reported in a respective dedicated control channel (see Morris, Abstract and column 3, lines 51-60).

Regarding claim 4, Chuprun further teaches the calibration signal is transmitted with the maximum allowed transmit power level (see mobile network devices of fig.1,

see wireless connection in-between each mobile network device, and column 4, lines 32-35, see "*each node is transmitted to all of the other nodes*").

Regarding claim 5, Chuprun further teaches the topology map is updated when a new network device joins the network (see fig.1).

Regarding claims 7 and 36, Chuprun further teaches the topology map is stored in the central controller of the wireless network (see column 4, lines 23-28).

Regarding claim 8, Chuprun further teaches topology map is broadcasted in the whole network (see fig.1).

Regarding claim 9, Chuprun further teaches only the parts of the topology map related to a specific network device are transmitted to specific network device (see fig.1 for wireless communication between devices).

Regarding claim 11, the contents of the topology map are codes that are mapped to receive power values (Abstract, column 2, lines 1-14 and column 3, lines 45-50, see "quality").

Regarding claim 12, the combination of Chuprun and Morris further teaches the measurement phase and/or reporting phase is initiated by the network device creating the topology map (see Morris, Abstract and column 3, lines 51-60).

Regarding claim 14, Chuprun further teaches characterized in that the functions are performed on demand of another network device or on an internal demand (see column 2, lines 3-23).

Regarding claim 21, Chuprun further teaches the calibration signal is transmitted in a dedicated control channel (see mobile network devices of fig.1, see wireless

connection in-between each mobile network device, and column 4, lines 32-35, see "*each node is transmitted to all of the other nodes*").

Regarding claim 23, Chuprun further teaches the calibration signal is transmitted with the maximum allowed transmit power level (see mobile network devices of fig.1, see wireless connection in-between each mobile network device, and column 4, lines 32-35, see "*each node is transmitted to all of the other nodes*").

Regarding claim 24, Chuprun further teaches the topology map is updated when a new network device joins the network (see fig.1).

Regarding claim 26, Chuprun further teaches topology map is stored in the central controller of the wireless network (see fig.1).

Regarding claim 27, Chuprun further teaches topology map is broadcasted in the whole network (see fig.1).

Regarding claim 28, Chuprun further teaches only the parts of the topology map related to a specific network device are transmitted to specific network device (see fig.1).

Regarding claim 30, Chuprun further teaches the measurement phase and/or reporting phase is initiated by the network device creating the topology map (Abstract, column 2, lines 1-14 and column 3, lines 45-50, see "quality").

5. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuprun et al (US 6,115,580) in view of Morris et al (US 5,003,619) and further in view of Pelech et al (US 6,243,585).

Regarding claims 6 and 25, the combination of Chuprun and Morris teaches the method according to claims 1 and 20. The combination of Chuprun and Morris does not specifically disclose the topology map is updated after a predetermined amount of time.

Pelech teaches the topology map is updated after a predetermined amount of time (see column 10, lines 10-19).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Pelech to the system of Chuprun and Morris so that there is little or no interruption in service to the wireless terminals (see Pelech, column 10, lines 16-19).

6. Claims 10 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuprun et al (US 6,115,580) in view of Morris et al (US 5,003,619) and further in view of Jennings,III (US 6,173,191).

Regarding claims 10 and 29, the combination of Chuprun and Morris teaches the method according to claims 1 and 20. The combination of Chuprun and Morris does not specifically disclose the calibration signal is transmitted using an omni-directional antenna.

Jennings teaches the calibration signal is transmitted using an omni-directional antenna (see Column 3, lines 65-67 and see column 14, lines 13-16).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Jennings into the system of Chuprun and Morris in order to transmit the calibration signal in all direction.

7. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuprun et al (US 6,115,580) in view of Morris et al (US 5,003,619) and further in view of Feng (US 5,374,936).

Regarding claim 15, the combination of Chuprun and Morris teaches claim 13. The combination of Chuprun and Morris does not specifically disclose a calibration decoder that initiates the broadcast of a calibration signal and the measurement of the reception quality of one or more incoming calibration signals upon reception of a measurement control signal.

Feng teaches a calibration decoder (see fig.3 box 28 and box 32) that initiates the broadcast of a calibration signal and the measurement of the reception quality of one or more incoming calibration signals upon reception of a measurement control signal (see column 2, lines 18-21).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Feng into the system of Chuprun and Morris so that signal transmitter can be activated directly or remotely, actively or passively (see column 1, lines 30-31).

Regarding claim 16, the combination of Chuprun and Morris teaches claim 13. The combination of Chuprun and Morris does not specifically disclose the calibration decoder initiates the transmission of one or more measurement results upon reception of a reporting control signal.

Feng teaches the calibration decoder (see fig.3 box 28 and box 32) initiates the transmission of one or more measurement results upon reception of a reporting control signal (see column 2, lines 18-21 and see fig.2, multiple arrows or multiple output or input from each device).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Feng into the system of Chuprun and Morris so that signal transmitter can be activated directly or remotely, actively or passively (see column 1, lines 30-31).

Regarding claim 17, the combination of Chuprun and Morris teaches claim 13. The combination of Chuprun and Morris does not specifically disclose a report encoder that receives one or more signal quality indication signals and encodes therefrom a signal quality control signal to be transmitted to the other network device.

Feng teaches a report encoder (see fig.3 box 28 and box 32) that receives one or more signal quality indication signals and encodes therefrom a signal quality control signal to be transmitted to the other network device (see fig.2, multiple arrows or multiple output or input from each device).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Feng into the system of Chuprun and Morris so that signal transmitter can be activated directly or remotely, actively or passively (see column 1, lines 30-31).

Response to Arguments

8. Applicant's arguments with respect to claims 1-18, 20-31 and 36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 9:30am-8:00pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nghi H. Ly